

THREE NEW STRIPED SKINKS, (*CTENOTUS*, LACERTILIA, SCINIDAE)
FROM QUEENSLAND.

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ABSTRACT

Ctenotus arcanus sp. nov., *Ctenotus eurydice* sp. nov., and *Ctenotus ingrami* sp. nov. are described from eastern Queensland and adjacent northern New South Wales. A key to the *Ctenotus* species of southeastern Queensland is provided.

INTRODUCTION

Ingram and Covacevich (1981) recognize a total of twenty-three species of *Ctenotus* occurring in Queensland. In addition the following species may be added to this list, *C. piankai* Storr, *C. eutaenius* Storr, *C. monticola* Storr, *C. capricorni* Storr, *C. zebrilla* Storr and *C. allotropis* Storr (Storr 1970, 1981).

Recent investigations of Queensland populations of *Ctenotus taeniolatus* (Shaw) indicate that this species is composite and includes three forms readily distinguishable by colouration and size (max. SVL : 76–87 mm) from sympatric *C. taeniolatus*. These three species are the subject of the following paper.

Abbreviations used in the text are as follows: SVL — snout to vent length; TL — tail length, HW — head width; FL — forelimb length; HL — hindlimb length; MBS — midbody scale rows; VS — ventral scales between chin and cloaca; AM — Australian Muscum, Sydney; ANWC — Australian National Wildlife Collection, Canberra; QM — Queensland Muscum, Brisbane; WAM — Western Australian Muscum, Perth. All measurements are recorded in millimetres. Terminology follows Smith (1946). Descriptions are based on hypodigm (e.g. Storr 1970, 1975). The species groups of Storr (1981) are recognized here.

Ctenotus arcanus sp. nov.
Fig. 1. Pl, 1-1.

HOLOTYPE. QM J36925 Coonoon Gibber Creek, Conondale Range southeastern Queensland. Collected during September – October 1978 by D. Milton.

PARATYPES. J11030 10 miles W. of Bundaberg; J30266 Fraser Island; J31863 Glastonbury via Gympie; J38695 Mt Tewantin via Noosa; J30723 Jimna; J34588 Peach Trees via Jimna; J30722 Crohamhurst via Maleny; J12111–2 Cedar Creek Falls, Mt Tamborine; J437–8, J440–2 'south Queensland'; J1682 'Queensland'.

DIAGNOSIS. A moderately large member of the *C. lesueurii* group with 7 (rarely 8) upper labials; 3 or 4 pairs of nuchals; snout rounded in profile; light-edged black mid-dorsal stripe disappearing with age; broad black upper lateral zone with widely spaced, single, white spots; one broad mid-lateral stripe, one narrow dorsolateral stripe along body; ground colour of adult dorsum brown; complex light and dark pattern in parietal region absent; 20–23 callose lamellae under fourth toe; 26–28 mid-body scale rows.

DISTRIBUTION. Coastal southeastern Queensland, Fraser Island and Bundaberg in the north to Mt Tamborine in the south, extending inland only as far as the coastal ranges (Fig. 1).

DESCRIPTION. SVL 66.0 – 87.0 (N = 16, mean 73.6). Length of appendages (%SVL): TL 182 – 204 (N = 10, mean 189.9): FL 21.6 – 28.7 (N = 16, mean 24.8): HL 36.7 – 49.5 (N = 16, mean 44.6).

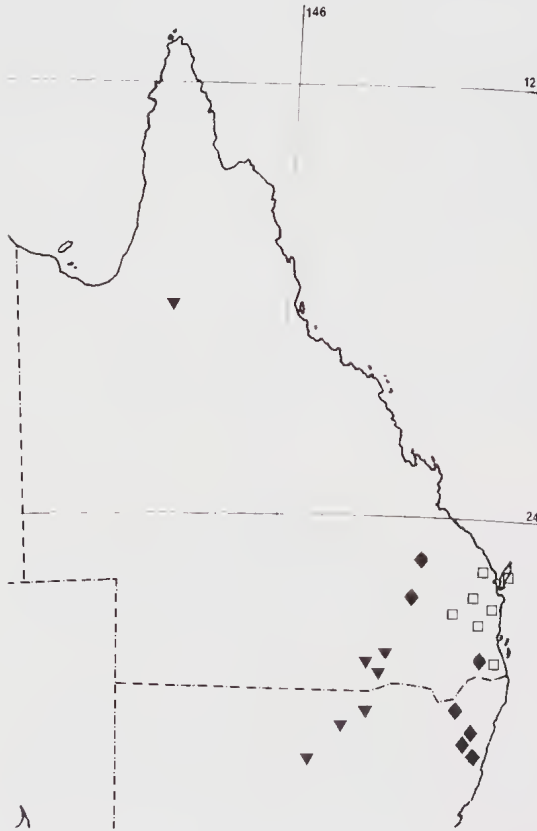


FIG. 1 Distribution of *Ctenotus* species. *C. arcanus* (open squares), *C. eurydice* (closed diamonds) and *C. ingrami* (closed triangles).

Snout rounded in profile. Nasals separated (occasionally in short contact). Prefrontals moderately large, separated. Preoculars 2. Postoculars 1. Supraoculars 4, first three in contact with frontal. Supraciliaries 8–10 (mean, 8.7). Second loreal approximately 1.4 times width of first loreal. Presuboculars 2 (except for holotype where four are present on right side and three on left). Postsuboculars 4–6, usually 5 (mean 5.6). Upper labials 7 (rarely 8), fifth below eye, last three largest. Temporals 1 + 2, upper secondary largest. Ear lobules 3–5 (mean 4.0). Nuchals in 3–5 pairs. MBS 26–28 (mean 27.3). VS 70–81 (mean 75.8). Lamellae under fourth toe 20–23 (mean 21.2), callose with slight lateral compression in some specimens.

Dorsally olive brown. Moderately wide, light-edged, black mid-dorsal stripe in juveniles becoming reduced or absent in adult specimens. In some older specimens the mid-dorsal stripe may remain as a narrow ill-defined black line, more distinct anteriorly. Fine whitish dorsolateral line and broad whitish midlateral line, below which wavy grey markings present. Upper lateral surface black with single series of well spaced white spots, which are less distinct posteriorly and become poorly defined in larger specimens. The white dorsolateral line may be bordered dorsally by a narrow black band.

ETYMOLOGY. The name is taken from the latin *arcanus*, meaning hidden. This refers to the long confusion of this taxon with *C. robustus* Storr and *C. taeniolatus*.

HABITAT. This species occurs in *Eucalyptus* dominated open forest and woodland in coastal areas or adjacent upland areas (Conondale Range, Jimna, Mt Tamborine) or rocky outcrops (Mt Tewantin).

Ctenotus eurydice sp. nov.

Fig. 1. Pl. 1–2.

HOLOTYPE. AM R98372 (formerly QM J34112) Boonoo Boonoo Falls via Tenterfield northeastern New South Wales. Collected on 15 December 1978 by G.V. Czechura.

PARATYPES. (Queensland) QM J15614 Coomanglah State Forest via Monto; J27526 Marlaybrook, Bunya Mountains via Kingaroy; J39223 Mt Gravatt; J1618 'Queensland'; (New South Wales) AM R59266 3 mi from Nymboidea towards Hortons Ck; R52719 0.5 mi south University of New England, Armidale; R91150 10 mi E. Aspley Falls on Walcha Pt Macquarie Rd.

DIAGNOSIS. A moderately large member of the *C. lesueurii* group; upper labials 7 or 8, nuchals in 4 or 5 pairs; snout rounded in profile with adult pattern consisting of 10 longitudinal pale lines (including wide olive dorsal lines) along body; mid-lateral line entering ear at or near mid-line, not continuous anteriorly; complex light and dark pattern in the parietal – frontal region) 12–23 lamellae under fourth toe; 25–27 midbody scale rows.

DISTRIBUTION. Great Dividing Range in west, as far east as the Brisbane area (Mt. Gravatt). North to Monto and south to the Armidale region of northern New South Wales (Fig. 1).

DESCRIPTION. SVL 56.3–76.6 (N=8, mean 74.3). Length of appendages (% SVL): TL 119.2–229.0 (N=5, mean 179.1); FL 18.3–21.6 (N=8, mean = 20.1); HL 39.2–41.9 (N=8, mean=40.5). Snout rounded in profile. Nasals separated or in short contact. Nostril located anteriorly in nasal. Prefrontals moderately large, separated. Supraoculars 4, first three in contact with frontal. Supraciliaries 8–9 (mean 8.2) first largest. Preoculars 2. Postoculars 1. Second loreal about 1.4 times as wide as first loreal. Presuboculars 2. Postsuboculars 4–6 (mean 5.1). Upper labials 7 or 8, fifth or sixth below eye, posterior three largest. Temporals 1+2, upper secondary largest. Ear opening vertically elliptical, lobules 3 or 4. Nuchals in four or five pairs. MBS 25–27 (mean 26.6). VS 73–76. (mean 74.3). Lamellae under fourth toe, 12–23 (mean 18.6), callose. Lowland specimens tend to have lower lamellae counts (< 20), but differ only in this respect from upland specimens.

Dorsally olive brown with moderately wide black mid-dorsal stripe. Lateral sutures of frontal light-edged. Complex pattern of light lines behind frontal on parietal region. This marking is continuous with light lines which edge mid-dorsal stripe. Three whitish lines laterally (dorsolateral, mid-lateral and lower lateral), lower two wider than uppermost line. Lateral surface black. Mid-lateral stripe not continuous over anterior margin of ear-opening, rather entering ear at or near mid-level. Lower lateral line wavy between ear and forelimb, usually reaching ear posteriorly. Broad black region between dorsolateral and mid-lateral lines usually uniformly black, although some individuals exhibit a few single anterior white spots, or, a row of widely spaced single spots. The white dorsolateral line is bordered dorsally by a narrow black band.

ETYMOLOGY. Eurydice was the wife of the mythical Greek poet Orpheus. The name was arbitrarily chosen.

HABITAT. The holotype was collected among rocks in low woodland with dense heath understory at Boonoo Boonoo Falls. The Marlaybrook specimen was collected in semi-evergreen vine thicket.

Ctenotus ingrami sp. nov.

Fig. 1. Pl. 1–3.

HOLOTYPE. QM J34792 Moombah Station approximately 60 km north-east of St George south-central Queensland. Collected during 10–12 January, 1979 by G.V. Czechura and T. Low.

PARATYPES. (Queensland) WAM R56322 11 km west of Croydon; QM J34791 Moombah Station via St George; J30438 St George; AM R96195 4.4 km from Westmar; (New South Wales) ANWC R1799, R1896–8, R2086 Fairholme Station via Nyngan; AM R16744 Mungindi; R77217, R95263 Carinda rubbish tip, Carinda.

DIAGNOSIS. A moderately large member of the *C. lesueurii*(?) group; upper labials 8; nuchals in 3 to 5 (commonly 4) pairs; snout depressed, pointed in profile; similar juvenile and adult pattern with a total of eight light lines along body; ground colour of dorsum brown; light-edged black mid-dorsal stripe present; uniformly brown head and parietal region; 19–25 callose lamellae under fourth toe; 25–27 mid-body scale rows.

DISTRIBUTION. Central Queensland and New South Wales, immediately west of the Great Dividing Range, north to Croydon (Fig. 1).

DESCRIPTION. SVL 44.9–83.7 (N = 13, mean 66.2). Length of appendages (%SVL) : TL 186.2–235.0 (N = 5, mean 204.8) : FL 23.2–29.2 (N = 13, mean 26.7) : HL 42.6–50.8 (N = 13, mean 47.9).

Snout depressed, pointed in profile. Nasals separated (occasionally in short contact). Prefrontals moderately large, separated. Supraoculars 4, first three contacting frontal. Supraciliaries 8 (rarely 9), second loreal about 1.5 times length of anterior loreal. Presuboculars 2. Postsuboculars 5–6 (mean 5.2). Upper labials 8, sixth below eye, in graded series. Temporals 1 + 2, upper secondary largest. Ear lobules 3–5 (mean 4.1). Nuchals in 3–5 pairs (commonly 4). MBS 25–27 (mean 26.0). VS 58–70 (mean 64.5). Subdigital lamellae 19–25 (mean 22.9), callose.

Dorsally olive brown with moderately wide black mid-dorsal stripe. Mid-dorsal stripe edged with lighter stripes. Dorsolateral, mid-lateral and lower lateral stripes present. Lateral surfaces black, although dorsal colour may intrude into the upper lateral zone (in some specimens almost as far as the mid-lateral stripe). Mid-lateral line bisects ear opening. Head to nuchal region uniformly olive brown. Lateral spotting or other form or patterning absent. The white dorsolateral line is bordered dorsally by a narrow black band.

ETYMOLOGY. This species is named in recognition of the contribution of Mr. Glen Ingram (Queensland Museum) to Queensland seineid taxonomy.

HABITAT. Moombah Station specimens were collected in *Acacia catenulata* forest (shrub and ground layers sparse) on stony massive earths (data from Galloway, Gunn and Pedley 1974). Fairholme station specimens were collected in an area described by Chinnick and Key (1971) as a *Eucalyptus populnea* - *Geijera parviflora* - *Capparis mitchellii* association growing on red-brown to clay loam soils where *C. ingrami* was closely associated with *Atriplex nummularia*. The Croydon specimen was collected in a *Eucalyptus miniata* - *Acacia* sp. association on a gravelly substrate (WAM registration data).

KEY TO *CTENOTUS* SPECIES OF SOUTHEASTERN QUEENSLAND

- 1a. Body pattern consisting entirely of longitudinal stripes2
 1b. Body pattern with both stripes and spots4
 2a. Ten light lines along body; ground color of dorsum black; expanded olive dorsal stripes present3
 2b. Eight white lines along body; ground color of dorsum olive brown; olive dorsal stripes absent*ingrami*
 3a. Snout pointed in profile; mid-lateral stripe continuous over anterior margin opening or reaching near anterior margin then passing around ear opening; SVL < 60 mm
 *taeniolatus*
 3b. Snout rounded in profile; mid-lateral stripe reaching ear opening at mid-level — either discontinuous or passing around ear-opening from this point; SVL 56–76 mm*eurydice*
 4a. Spots present in dorsal pattern; at least distal subdigital lamellae mucronate5
 4b. Spots absent in dorsal pattern; subdigital lamellae callose6
 5a. Mid-dorsal stripe absent; only distal subdigital lamellae mucronate*allotropis*
 5b. Mid-dorsal stripe present; all subdigital lamellae mucronate *strauchii strauchii*
 6a. Upper lateral zone black with single white spots present7
 6b. Upper lateral zone olive brown with paler poorly defined spots (greater than one scale deep) *robustus*

- 7a Mid-dorsal stripe narrow and poorly defined in adults, four pale lines around body; upper lateral spots closely spaced*arcanus*
 7b. Mid-dorsal stripe well defined; ten pale lines around body; upper lateral spots confined anteriorly or widely spaced*eurydice*

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Fairholme Station specimens were collected while one of us (J.W.) engaged in research under the direction of Dr. M. Brooker.

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MEMOIRS OF THE QUEENSLAND MUSEUM

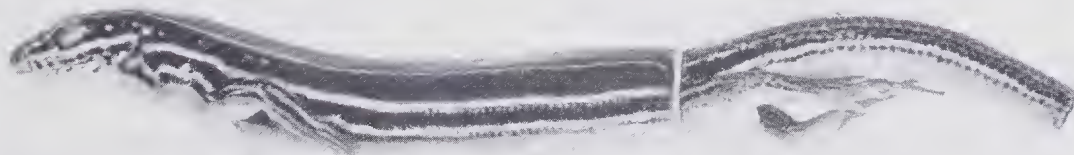
PLATE I.

1. *Ctenotus arcanus* sp. nov. (QM J38695 Mt Tewantin via Noosa, Paratype).
 2. *Ctenotus eurydice* sp. nov. (AM R98372 Boonoo Boonoo Falls via Tenterfield, Holotype).
 3. *Ctenotus ingrami* sp. nov. (QM J34792 Moombah Station approximately 60 km northeast St George, Holotype).
- Scale equals one centimetre.

1



2



3

